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09/708,205	11/07/2000	Nagassubramanian Gurumoorthy	42390.P10200	1127

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EXAMINER

DAMIANO, ANNE L

ART UNIT	PAPER NUMBER
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2114

DATE MAILED: 03/05/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/708,205

Applicant(s)

GURUMOORTHY ET AL

Examiner

Anne L Damiano

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,3-8,10-16,18-23,25,26 and 28-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 30-44 is/are allowed.
- 6) ☒ Claim(s) 1,3-6,8,11-13,15,16,19-21,23,26 and 28 is/are rejected.
- 7) ☒ Claim(s) 7,10,14,18,22,25 and 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6 . 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. The examiner withdraws previous objection to Figure 1. Therefore, the examiner accepts the original drawing filed 11/07/00.

### ***Allowable Subject Matter***

2. Claims 30-44 are allowed.

The following is an examiner's statement of reasons for allowance:

The primary reason for allowance of claims 30-34 is the inclusion of maintaining pointers in the firmware interface to the diagnostic modules at an addressable portion of the storage medium; and converting pointers in the firmware interface in response to a change in virtual addressing by the operating system in a method comprising storing one or more diagnostic modules comprising machine-readable instructions for performing one or more diagnostic procedures of a processing system and hosting an operating system capable of initiating execution of the one or more diagnostic procedures through a firmware interface, as recited in the claims.

The primary reason for allowance of claims 35-39 is the inclusion of logic to maintain pointers in the firmware interface to the diagnostic modules at an addressable portion of the storage medium; and logic to convert the pointers in the firmware interface in response to a change in virtual addressing by the operating system in an apparatus comprising logic to store in a memory one or more diagnostic modules comprising machine-readable instructions for

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performing one or more diagnostic procedures of a processing system and an operating system capable of initiating execution of the one or more diagnostic procedures through a firmware interface, as recited in the claims.

The primary reason for allowance of claims 40-44 is the inclusion of maintaining pointers in the firmware interface to the diagnostic modules at an addressable portion of the memory; and converting pointers in the firmware interface in response to a change in virtual addressing by the operating system in an article comprising initiating storage of machine-readable instructions for performing one or more diagnostic procedures of a processing system in a first physical area of a memory and initiating storage of machine-readable instructions for executing an operating system capable of initiating execution of one or more diagnostic procedures through a firmware interface, as recited in the claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Claims 7, 10, 14, 18, 22, 25 and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1, 3-6, 8, 11-13, 15, 16, 19-21, 23, 26 and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Burckhardt et al. (6,101,617).

As in claim 1, Burckhardt discloses a method comprising:

In a physically addressable area of a system memory, storing one or more diagnostic modules comprising machine-readable instructions for performing one or more diagnostic procedure of a processing system (column 2: lines 5-6 and column 3: lines 49-50 and lines 54-57) (It is inherent that the diagnostic partition is physically addressable. The hard drive is the system memory);

Hosting an operating system capable of addressing the system memory (column 3:lines 49-54) (The hard drive is the system memory. The operating system is capable of addressing the system memory.); and

Inhibiting the operating system from remapping the machine-readable instructions for performing the one or more diagnostic procedures (column 3: lines 43-57). (The system memory is partitioned into the primary partition, where the main operating system resides and the secondary partition where the diagnostic programs reside. The primary partition cannot access the secondary partition. Therefore, the operating system is inhibited from remapping the diagnostic procedure.)

As in claim 8, Burckhardt discloses an apparatus comprising:

A processor (claim 1: lines 1-2);

A memory to store data;

Logic to store in a physically addressable area of the memory one or more diagnostic modules comprising machine-readable instructions for performing one or more diagnostic procedures of a processing system (column 2: lines 5-6 and column 3:lines 49-50 and lines 54-57); (It is inherent that the diagnostic partition is physically addressable. The hard drive is the system memory.)

An operating system capable of initiating execution of the one or more diagnostic procedures on the processor (column 10: lines 9-26); (When the operating system times out, the REBOOT COUNT is incremented, and compared against the REBOOT LIMIT. When the system has reached it's reboot limit, the BOOT UTILITIES flag is set and the system

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automatically reboots to the diagnostic program. The operating system timing out causes all of this. Therefore, in this case, the operating system initiates the execution of the diagnostic procedure.)

Logic to inhibit the operating system from remapping the machine-readable instructions for performing the one or more diagnostic procedures from the physically addressable area. (column 3: lines 43-57). (The system memory is partitioned into the primary partition, where the main operating system resides and the secondary partition where the diagnostic programs reside. The primary partition cannot access the secondary partition. Therefore, the system includes logic that inhibits the operating system from remapping the diagnostic procedure.)

As in claim 15, Burckhardt discloses a circuit for initiating a boot sequence for a processing system (column 1: lines 14-18), the circuit comprising:

Logic to store in a physically addressable area of a storage medium one or more diagnostic modules comprising machine-readable instructions for performing one or more diagnostic procedures of a processing system (column 2: lines 5-6 and column 3: lines 49-50 and lines 54-57) (It is inherent that the diagnostic partition is physically addressable. The hard drive is the system memory. At some point in time the storage of the diagnostic program on the second partition of the hard drive memory had to have occurred and therefore logic to do so must be existent in the system.);

Logic to initiate an operating system capable of addressing the storage medium (column 3: lines 49-54) ; (The hard drive is the system memory. The operating system is capable of

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addressing the hard drive. The system can boots to the operating system partition indicating that logic to initiate the operating system is existent in the system.) and

Logic to inhibit the operating system from remapping the machine-readable instructions for performing the one or more diagnostic procedures in the storage medium (column 3: lines 43-57). (The system memory is partitioned into the primary partition, where the main operating system resides and the secondary partition where the diagnostic programs reside. The primary partition cannot access the secondary partition. Therefore, the system includes logic that inhibits the operating system from remapping the diagnostic procedure.)

As in claim 23, Burckhardt discloses an article comprising:

A storage medium comprising machine-readable instructions stored thereon for:

Initiating storage of machine-readable instructions for performing one or more diagnostic procedures of a processing system in a first physical area of a memory (column 2: lines 5-6 and column 3: lines 49-50 and lines 54-57) (It is inherent that the diagnostic partition is physically addressable. The hard drive is the system memory. At some point in time the initiation of the storage of the diagnostic program on the second partition of the hard drive memory had to have occurred.);

Initiating storage of machine-readable instructions for executing an operating system for the processing system in a second physical area of the memory (column 3: lines 49-54); (The hard drive is the system memory. The operating system is capable of addressing the hard drive. At some point in time the initiation of the storage of the operating system on the primary partition of the hard drive memory had to have occurred.) and



Inhibiting the operating system from remapping the machine-readable instructions for performing the one or more diagnostic procedures in the first physical area of the memory (column 3: lines 43-57). (The system memory is partitioned into the primary partition, where the main operating system resides and the secondary partition where the diagnostic programs reside. The primary partition cannot access the secondary partition. Therefore, the operating system is inhibited from remapping the diagnostic procedure.)

As in claim 3, Burckhardt discloses the one or more diagnostic modules comprising runtime drivers executable through a firmware interface (column 3: lines 54-57 and column 12: lines 10-14 and lines 21-28). (The diagnostic partition comprises a reduced operating system for minimum operations. In order for the partition to communication with the modem, some form of driver must be existent in the system to allow for communication between the operating system and the peripheral. It interpreted that the inherent drivers are runtime drivers. The drivers must be stored in non-volatile memory and therefore access to the firmware requires a firmware interface.)

As in claims 4, 11, 19, and 26 Burckhardt discloses the diagnostic procedures comprising diagnostic procedures for testing one or more peripheral devices of the processing system (column 3: lines 54-57 and column 12: lines 10-14 and lines 21-28) (It is understood that the diagnostic procedure is meant to test peripheral devices to diagnose the system's problem. However, the step of determining if the dial-out of the modem was successful is also the testing of a peripheral device of the processing system.)

As in claims 5, 12, and 20 Burckhardt discloses the apparatus and circuit comprising logic to implement the method further comprising:

Loading the one or more diagnostic modules to a first physically addressable area of the system memory (If the system boots to the diagnostic partition, it's reduced operating system, that is still considered part of the diagnostic partition, will be loaded.); and

Loading the operating system to a second physically addressable area of the system memory from a non-volatile device (column 3: lines 49-54). (If the system boots to the primary partition, the operating system will be loaded.)

As in claims 6, 13 and 28 Burckhardt discloses apparatus and circuit comprising logic to load one or more diagnostic modules to the first physically addressable area of the system memory from a basic input/output system (BIOS) (column 3: lines 49-54). (A BIOS must be existent to load the reduced operating system of the diagnostic partition.)

As in claim 16, Burckhardt discloses the circuit comprising a basis input/output system (BIOS) adapted to integrate with the processing system (column 3: lines 52-54). (A BIOS must be existent to load the operating system of the primary partion.)

As in claim 21, Burckhardt the circuit comprising a basic input/output system (BIOS) comprising logic to load one or more diagnostic modules to the first physically addressable area

of the storage medium (column 3: lines 49-54). (A BIOS must be existent with logic to load the reduced operating system of the diagnostic partition.)

### ***Response to Arguments***

6. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection. Examiner objected to claims as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form *including all of the limitations of the base claim* and any intervening claims. Applicant's amendment withdrew the limitation, "wherein the operating system is capable of initiating execution of the one or more diagnostic procedures through firmware", thereby changing the scope of a claim and necessitating a new ground of rejection.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

See PTO-892.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne L Damiano whose telephone number is (703) 305-8010. The examiner can normally be reached on M-F 9-6:30 first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (703) 305-9713. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

ALD

  
**SCOTT BADERMAN**  
**PRIMARY EXAMINER**